

THE CHRONICLE

of Early American Industries

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Cooperage

by GILLIAN W. B. BAILEY

The word "Cooper" is derived from the Early Gaul who called their wooden vessels used to hold their wine "Cupae" and the craftsmen who made them "Cuparius." From this was developed later the German word "Kofer" and eventually came our English word "Cooper."

But before we plunge into the Established Order of Coopers let us first trace quickly how the necessity of his labors originated.

It is a craft pursued in various forms, and known to have existed for over 2000 years. In it was developed and perfected one of the strongest building principles, i.e., the principle of the double arch. When a barrel is viewed from the head, each stave acts as a keystone in the arch construction supported by the other staves as a base. When a barrel is viewed from the side, the stave is the keystone supported by the two heads as a base. In the two thousand years of scientific progress no inventor has been able to improve upon the double arch construction of the wooden barrel.

The earliest container (of which we have record) and known to have been used in home and commerce was the pottery jar. These had the great drawbacks of fragility and weight. The primitive huntsman developed a container of animal skin which was not breakable, but which imparted a flavor to all fluids and which in its early forms leaked. The early Romans learned how to overcome the porous quality of their casks by lining them with pitch, and made skins liquid tight by lining them with resin or oil.

Probably the earliest barrel consisted of a hollow log or tree bole which was sealed at each end with animal skins—these also had the handicap of splitting under dry heat and although the container was bound with thongs, it was not durable for commerce.

(Continued on page 222)

The Sailmaker's Gear

by M. V. BREWINGTON

Drawings by CATHERINE A. PERRY

(Continued from June issue)

In drafting the plans of a sail by which the cloth was laid down, cut and finished, the sailmaker used tools common to mechanical draftsmen and the building trades. For drawing the plans on paper, he had a pair of ordinary draftsman's *dividers* and a *scale*, in the old days a Gunter's scale, now an architect's or engineer's scale. To keep his lines at right angles he had what seems to have been a specialized tool: a *square* made of brass, similar to a carpenter's steel square. Its long leg was about twelve inches in length and the short leg about six inches, both divided into eighths of an inch usually, although some sailmakers preferred tenth divisions. Pencils completed the ordinary equipment but occasionally one finds a full set of drafting instruments including triangles and curves.

Duplicating the drafting tools were large sized tools used for laying the sail plan as lifted from the paper down on the sail loft floor. The tiny brass square had as its mate a *wooden square* with legs about six feet long. The counterpart of the dividers was a well-stretched cord with a pencil made fast at one end. The scale was supplanted on the loft floor by a hundred-foot *tape line* and a *yard stick*, both divided into feet and inches.

In place of the tacks which held the paper plan flat, the canvas as it was laid down and cut was held in place with ordinary scratch *awls* stuck through the cloth into the loft floor.

Much of the sailmaker's work, the laying out and cutting, is done kneeling on the floor and stooping, but the finishing, roping, and seaming are performed while seated. In the course of time the sailmaker developed a *bench* (figure 9) as specialized as those of the cobbler and the shingle-maker. It was a simple

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wooden affair, usually about seven feet long. Generally the seat was bare but at times it had a small canvas pad which could slide along the seat. All the needed gear was grouped at the sailmaker's right hand, resting in holes bored through the seat. Like the keyboard of a typewriter the gear assumed an arrangement with the most used piece in the handiest position. Some individualists, of course, varied their arrangement from the standard. The earliest picture of a bench complete with its gear so far found is that shown in Steel. A

cut sail is something in which to take no small pride. But, actually the practice began as a matter of compulsion. In the year 1736, as a means of reducing the quantity of sail cloth being smuggled into England, all sailmakers were required by law to indelibly place their name and address on every sail made. Thereby the customs officials could easily follow suspected cloth to its point of origin and collect either duties or heavy fines. From then on until now the practice has been followed. The oldest of these markers known in the United

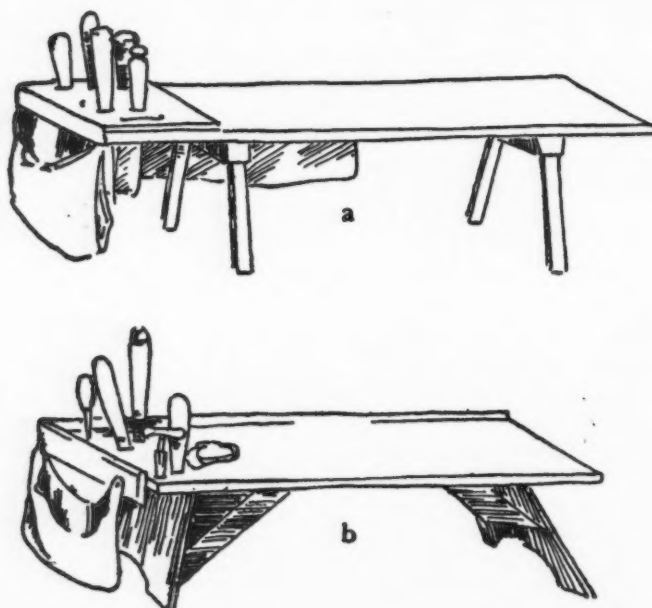


Fig. 9. BENCHES: a, ca. 1830-1840 in *The Mariners' Museum*; b, Wm. L. Godfrey's present bench.

somewhat earlier bench, French in origin, is illustrated in Romme's *L'Art de la Voilure*, 1761-1789, but not only is the gear missing, there is also a complete absence of any place in the top of the bench for a single piece of it. Benches began to be issued by the United States Navy to its sailmakers, even those on shipboard, in 1844. Prior to that year every man apparently provided his own.

Seemingly few artisans take quite as much pride in their work as the sailmakers—never do they fail to either stencil (figure 10) or to sew a label bearing their name on a sail. There is, of course, a certain amount of advertising value in the practice and a well-

States is a carved woodblock stamp, that of Nicholas Lane, ca. 1790, in the Peabody Museum, Salem, (figure 10b). The mark used by present day sailmakers on sails for commercial vessels is usually a stencil (figure 10a) and the marks used on two of the leading brands of sailcloth are similar (figure 10c and d).

As in every trade there are certain little practices and trade tricks which have grown up over the years. The sailmaker has his own long-splices, eye-splices, and methods of making cringles. These were all developed because they particularly fitted the sailmakers' needs for rope work which could be drawn to an exact size. All of them have been so well decried in *The*

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Ashley Book of Knots that it is useless to attempt a fresh description of them here. The sailmaker's method of knotting the end of his twine and twisting it is not well known. To make his knot the sailmaker threads the needle and then turns the thread around the blade with the standing part lying over the very end. This is pinched tightly with the left thumb and index finger, then the needle is pulled through the

pear to exist from the known evidence, little or no change seems to have taken place through the years: a different costume and the addition of electric lights and sewing machines would make Steel's 1794 sail loft look the same as one in use today. One at Gloucester, Virginia, 1768 was over a 'large warehouse' forty by twenty feet in size. Brown and Murphy in Baltimore in 1882 were working in one twenty-six

W M. L. GODFREY

a

NICHOLAS LANE
SAIL-MAKER.
SALEM, IN
NEW ENGLAND

b

WOODBERRY
EXTRA

c

MR VERNON
EXTRA

d

Fig. 10. LABELS: a, stencil used by Wm. L. Godfrey, Baltimore, 1946; b, woodblock stamp of Nicholas Lane, ca. 1790, Peabody Museum, Salem; c and d, stencils used by sail duck manufacturers, 1946.

loop. The result is an over-hand knot at the very end of the thread. The twist is put into the twine in one of two ways: first, by winding it in a close spiral around the shank of the needle from the eye to the point and then drawing the needle through the tube of thread so formed: or second, by holding the needle in the left hand while the right hand rolls the twine across the right thigh. The result of either method is a uniformly laid-up thread.

With so much specialized gear in use one might expect the place where the sailmaker practices his art to be particularly adapted to it. Quite the reverse is and has been the fact. His place of business usually occupied the top floor of a building, therefore the name 'loft'; but any smooth, dry, clean surface of fair size would serve. Although no full descriptions of early lofts ap-

pear to exist from the known evidence, little or no change seems to have taken place through the years: a different costume and the addition of electric lights and sewing machines would make Steel's 1794 sail loft look the same as one in use today. One at Gloucester, Virginia, 1768 was over a 'large warehouse' forty by twenty feet in size. Brown and Murphy in Baltimore in 1882 were working in one twenty-six feet by seventy feet. The larger the floor the easier it is to lay down and to cut a big sail, but a sailmaker with a floor twenty by forty feet would not refuse an order for a sail with a foot of fifty feet in length and a hoist of eighty feet. He simply drew his plans and laid down in such a way that the sail could be made in sections and then assembled for roping and finishing. Many sail plans are to be found with these sections carefully delineated. At times not even a building was used, the sailmaker working out-of-doors in a meadow or the village green—as recently as 1945 the author saw a sailmaker near St. Johns, Antigua, seaming a new sail in the shade of a palm tree. Just such a sail loft, if it could be called that, was depicted in the 1719 Spanish manuscript reproduced in *Arquitectura Naval Espanola*.

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The method of seaming sails was apparently described first by Mainwaring when he prepared his *Dictionary* about 1620-1623. He wrote, 'Monks-seams. This is a kind of sewing the canvases of the sails together when the edge of the one is sewn over the edge of the other, and so is sewn on both sides. This is the strongest way of sewing the sails.' All of this implied ways of seaming other than monks-seaming; no other methods, though, are described. The first edition of John Smith's *Sea Grammar* (not to be confused with his *Accidence* . . .) speaks of round seams in addition to monks, but the three types known today, round, flat, and monks, are not recorded until 1732 and then only by name

a single row of stitching, a cheaper but by no means as good a method as the former, the seam is called a 'beading.'

American sailmakers customarily stitched from the foot to the head of a fore and aft sail and vice versa with square sails. In the latter the inner cloths overlapped the next outboard cloth on the fore side, while on the fore and aft sails the after selvages of each cloth were on the port side of the sail. Boltropes were always on the after side of a square sail and the port side of fore and aft sails. Stitching is always from left to right.

Once the sewing machine was developed, its intro-

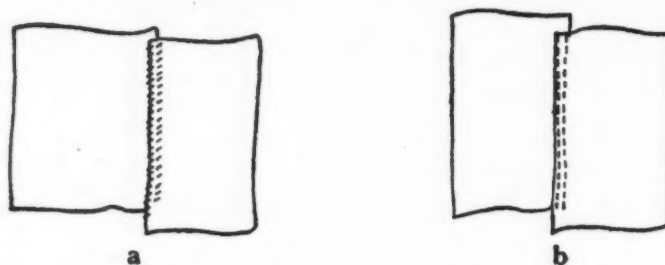


Fig. 11. SEAMS: a, round; b, flat.

without description. The sketches show the two real types; the monks-seam, of course, can be made up of two flat or two round or one round and one flat. Mainwaring gives no clues in his description as to the composition of his monks-seam. From his day until the nineteenth century, no definite description has been found and no actual sail of proven date is known to exist. Glascock, 1836, said a double flat seam was best; Alston, 1859, and Branson, 1858, representing British and American opinion, both preferred a double round seam; Todd and Whall, 1890, concurred, and today when a sail is seamed by hand, the two round seams are used. In very heavy sails it was customary to 'stick' a third seam, a flat one, down the center of the overlap. In making up a very light sail using drill or some other wide material, good sailmakers customarily run a seam down the center of the cloth. This not only strengthens the sail but it also improves the appearance and helps the sail to remain in the shape the sailmaker originally gave it. If in doing this the sailmaker folds the cloth to form a seam the width of the regular seams and stitches each edge, the process is called 'middle-seaming'; if he simply folds the cloth once and runs in

duction about 1890 throughout the American sail lofts was rapid. Three machine stitches are used: chain, straight and zigzag. The first is almost worthless since if a single stitch breaks the whole seam comes out. The zigzag stitch is used only in light cloth, usually yacht sails. But even if largely made up by a modern electric-powered machine, all sails are still roped and finished by hand in the same way sailmakers have worked for centuries. With the use of sail now confined almost exclusively to pleasure craft it seems very unlikely that any further development in the gear of the sailmaker will take place in the future.

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An Eighteenth-century Sailmaker at work
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Cooperage

(Continued from page 217)

In the Metropolitan Museum of Art in New York City, one may see an extremely ancient Egyptian drum dated XVIII and XXVI dynasties i.e., 1580-525 B. C. This drum is bilged about the same shape as a barrel, is not a solid piece of wood, but is made from curved wooden staves cemented together. It has leather heads bound on by leather thongs. Although this was a musical instrument, the Egyptians probably recognized the possibilities of this principle.

We read in history of Diogenes living in a cask. Imagination and jest allow us to think of his abode as being cramped, and uncomfortable, but the Greek "cask" was a clay vessel of 140 gallons capacity, so it is clear that Diogenes was not only wise, but enjoyed a comfortable residence. The Romans used clay vessels of 120 gallon capacity and bound them with wooden hoops probably made of willow, similar to those in use in parts of Italy today.

It is presumed that the principle of the Egyptian drum was carried all over the civilized world of its day. Cooperage was practiced extensively in England and on the continent and climbed to its height with the building in 1525 in the City of Heidelberg, Germany, a "tun" or barrel which was not filled until 1752, but which when filled was said to contain a volume of 50,000 gallons of wine.

About the 14th century, the Cooperage business was a recognized art and guilds sprang up in England and all over the continent. Workers sought to learn the craft and apprenticed themselves to a Master Cooperer who was a member of the Guild. Upon completion of his apprenticeship, the applicant was forced to construct a barrel and fire a barrel and while it was still smoking the other apprentices placed the maker inside his own barrel, doused him with water, poured shavings on his head, turned barrel and man on their sides and rolled them down the street with the Cooper still in the bulging middle of his own barrel, and so was born a Master Cooper.

Somewhere during the 15th Century, the "barrel" became a legal standard of capacity. This standard of capacity varied over the years. When our founding fathers sailed in the Mayflower to settle in New England, the supplies packed aboard ship were all stowed in barrels and John Alden of "Why-don't-you-speak-for-yourself-John" fame hired as a Cooper prior to

sailing. A set of Cooper's tools is listed as part of the Mayflower's cargo.

At the time of the settling of this continent by the Europeans, the Cooper had become an important craftsman, and the product of his hands was used for the shipment of all sorts of merchandise—meat, fish, whale oil, rum, molasses, sugar, tobacco, etc. Even shoes and money were transported in wooden barrels or kegs.

The Cooper's tools were simple. An axe to fell the tree, a fro to split the staves, a Cooper's adze or short handled axe to shape the staves, a shave bench to draw out hoops and also help shape the staves, a stave plane, a draw knife to shape the outside, a croze or special plane to cut the chime on the ends of the staves; (this chime held in the barrel head), a pair of Cooper's hoops with which he supported the staves before putting on the permanent hoops, a creset which held lighted charcoal which when placed inside the half-made barrel produced enough heat to allow the staves to be bent to shape as the hoops were driven home (and sometimes the creset was used to char the barrel inside), a drift to grip the hoop as it was driven tight by pounding with a Cooper's hammer, a scorper to even the insides of the staves, and a chamfer knife to even the inside ends of the staves above the chime.

The manufacture of a barrel sounds simple, and the tools are few in comparison to some of the other crafts, but let us stop to consider some of the Cooper's problems. First, we have a distinction between the Coopers themselves. A Cooper—as such made barrels—a "white" Cooper made tubs, pails, churns, buckets, tankards and other staved vessels—tubs were originally two-handled vessels and buckets had but a single handle.

Then the container was divided into two groups known in the trade as "tight or wet" for liquids and "slack or dry" for other contents, and their use was, of course, determined by their construction.

Having looked at the history of the barrel, traced the advancement of the Cooper and looked at his tools, we still have to consider the material from which the article is to be made. The fabric of wood is a complicated structure, and is variable from almost every angle—the kind of tree, the age of the tree. The wood changes in the same tree according to whether one used the "sap" wood, the "top" wood, or the "butt" wood. Even the manner in which the tree is sawn and conditions in which the wood is cut and kept, influences its behaviors and quality. Color, weight, smell, presence of knots, or season checks, are all more or

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less abundant and are practically recognized by the experienced Cooper.

He usually selected clear white oak of good quality and cut his staves and heading bolt at least two inches longer than necessary to allow for these vagaries in the wood. After selecting his wood, seasoning it, shaping it, and putting it together, the Cooper could look upon his work as a triumph of patience, skill and scientific knowledge. And the rewards of his industry? With much hard work, he could turn out two barrels a day—is it any wonder that at the turn of the 19th century, the hand craftsman was superceded by crude machinery developed by a growing demand for more and yet more wooden containers.

For many years, the barrel was of necessity not only a container of wet or dry merchandise, but must have been of correct size by volume.

Annual Meeting

More than seventy members attended the annual meeting of the Early American Industries Association, Inc. at Old Sturbridge Village, Massachusetts on June 16th and 17th.

Arriving on Friday, members registered at the Oliver Wight House (Museum Reception Center) and toured the historic buildings and craft shops.

Members of the Board of Directors met at 4:00 p.m. and elected Charles Vanderveer, 85 Cathedral Avenue, Hempstead, L. I., New York and Mrs. George Wells of Old Sturbridge Village to replace Rudolf P. Hommel, Richlandtown, Pa., deceased, and John W. Allen, Carbondale, Illinois, resigned.

Cocktails were served in the Great Room of the Tavern from 6:00 to 7:00 p.m. followed by the annual banquet. A fashion show of costumes from the Worcester Historical Society's collection was presented by Mrs. Elizabeth T. Davis, director, and Miss Ruth A. McBride of the Worcester Girls' Trade School. Music was furnished by a disk music box.

The Saturday session was called to order at 10:00 o'clock in the Village Meeting House. Mr. Earle W. Newton, director of Old Sturbridge Village welcomed the members, and Mr. Carl W. Drepperd, author, and member of EAIA from New York City, gave an interesting talk on "How We Converted Luxuries Into Necessities."

Members re-elected to serve on the Board of Directors until 1953 were:

Dr. Philip Batchelder, Rumford, R. I.

John W. Higgins, Worcester, Mass.

Dr. Frederick L. Lewton, Winter Park, Florida

Bertram K. Little, Brookline, Mass.

Janet R. MacFarlane, Cooperstown, N. Y.

George M. Simmons, Farmingdale, L. I., N. Y.

Frank K. Swain, Doylestown, Pa.

John S. Williams, Old Chatham, N. Y.

Mrs. W. B. Wolcott, Riverton, N. J.

New members elected were: Mrs. John H. Ballantine, Southbury, Conn., and Roscoe W. Smith, Monroe, N. Y.

All officers were re-elected as follows:

Edward Durell, Columbus, Ohio, President; Loring McMillen, Staten Island, N. Y., Lewis N. Wiggins, Shelburne, Vermont and Maj. A. Erland Goyette, Peterborough, N. H., Vice-Presidents; Miss Janet R. MacFarlane, Cooperstown, N. Y., Recording Secretary; Mrs. Irma P. Anderson, Columbus, Ohio, Corresponding Secretary, and Mrs. Josephine H. Peirce, Treasurer.

The meeting then adjourned to the Tavern where a "What's It" session was held.

At the luncheon meeting, Professor Dirk Jan Struik of Massachusetts Institute of Technology spoke on "The Strength and Limitations of Colonial Industries."

The Association adopted a Resolution presented by Charles Rufus Harte, on the death of Rudolf P. Hommel.

A discussion on *THE CHRONICLE* was followed by a vote to have the next volume the same size as Volume III, using magazine stock in order to use half-tones to better advantage. Volume IV begins in December.

(Continued from page 221)

COLLECTIONS

The Author. A complete group of old sailmaker's gear, largely from the Chesapeake Bay areas.

Bourne Whaling Museum, New Bedford. The most extensive public collection including a replica of the Briggs & Beckman Sail loft.

The Mariners' Museum, Newport News. A large collection with some very exceptional pieces.

The Peabody Museum, Salem. Collections acquired from a number of old Salem sailmakers including what is perhaps the oldest gear in the United States.

United States National Museum, Washington. The gear once used by Ware Branson, Jr., Sailmaker, U.S.N.

The Chronicle

Miscellany

by LAWRENCE B. ROMAINE

To bring before our readers a trade, art or craft that has not already been touched by another member, is indeed a "tough nut to crack." If you don't believe me, just try it . . .

However, I have come across an "amusing" (I hope) item which touches on the trades of the lamplighter, the sign painter and the Town Fathers:-

"ILLUMINATED STREET SIGNS.

Messrs. Editors: I wonder whether it is because everybody that can reasonably be expected to be interested in city improvements, knows all the streets by heart, that no attempt has ever been made to render the names of the streets at the corners visible at night-time. Were lamps hung against these signs—and that would be, as far as I can see, as good a place as any, for all other purposes as they generally occupy—the evil would at once be remedied. In England, where they go ahead of us in everything, except in the matter of freedom of the people, etc., etc., of which we are wont to boast, they have contrived the plan of embossing or painting the names of the streets on cross bars placed for the lamp-lighters' convenience at the top of the lamp posts. The sides of said bars being slanted off somewhat from above, the light of the lamp falls down and illuminates the name so that it can be read. It might be well, I think, for some of our wise-acres to meditate profoundly for a while on this subject, laying by for a season, perpetual motion and cooking stoves, of which articles there is already an abundance in the market."

A lost art is that of painting book bindings.

"PAINTED BINDING.

Many beautiful subjects may be formed on the sides of books by workmen skilled in painting. The volume is prepared by using pastwashed, so as to present a uniform fawn color, the designs being slightly traced, and afterwards colored according to the pattern, the colors being mixed to the proper shades with water. The colors must be tried on pieces of refuse leather, as, being spirit colors, when once laid on, no art can soften them down if too strong; and a peculiar lightness of touch will be necessary to produce the effect. Portraits may be executed in this manner and many superb designs have been executed by the best binders."

I was surprised to find that milk had ever been considered as more than a "cow to mouth" proposition before, say 1880, and yet, I find the following:

"PORTABLE MILK.

M. Dorshoff, the Russian chemist, who sometime since discovered the process of making starch into sugar, has lately made several experiments upon milk, the result of which he has arrived at is curious. He is said to have found a mode of keeping milk for use for any definite space of time. The process of preserving it is this: He causes new milk to be evaporated over a slow fire, until it is reduced to powder. This powder is then put into a bottle, which is hermetically sealed. When the milk is wanted for use, it is only to dissolve some of the powder into a suitable quantity of water, and the mixture so dissolved will have all the qualities as well as the taste of milk."

"VENTILATION OF STAGE-COACHES.

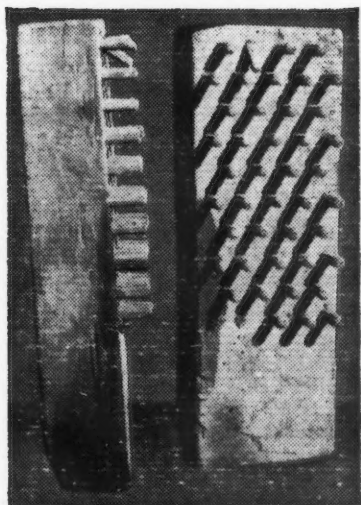
Sir: Permit me to offer to the public through the medium of your widely extended Magazine, a hint or two from an Old Traveler, on the subject of Stage-Coach ventilation. Many others, as well as myself have doubtless been annoyed by the 'aerophobia' of many who travel by our public conveyance, and the pertinacity of such persons in keeping the windows closed, for fear, as they say, of catching cold. Such persons have yet to learn that colds are more frequently the consequence of closely confined air in a badly ventilated compartment than of free exposure to the wind and weather. Some people seem to regard fresh air as poison and do all in their power to exclude it; for my own part, I think it is only one of the Blessings of Providence that cannot be taken to excess.

The mode of ventilation I would suggest is merely this, that the sashes of mail and other stage-coaches, instead of being glazed, as at present (the panel formed is by a pane of glass), should be made with wire-gauze, such as is now extensively in use for window-blinds. The vehicle would by this means be amply ventilated without the annoyance to anyone by currents of air; and, in case of rain, the sashes might be kept up without the choice of evils at present experienced, whether to be wet or suffocated."

The above notes are from the *Boston Mechanic* for 1834-1835.

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What Is It?

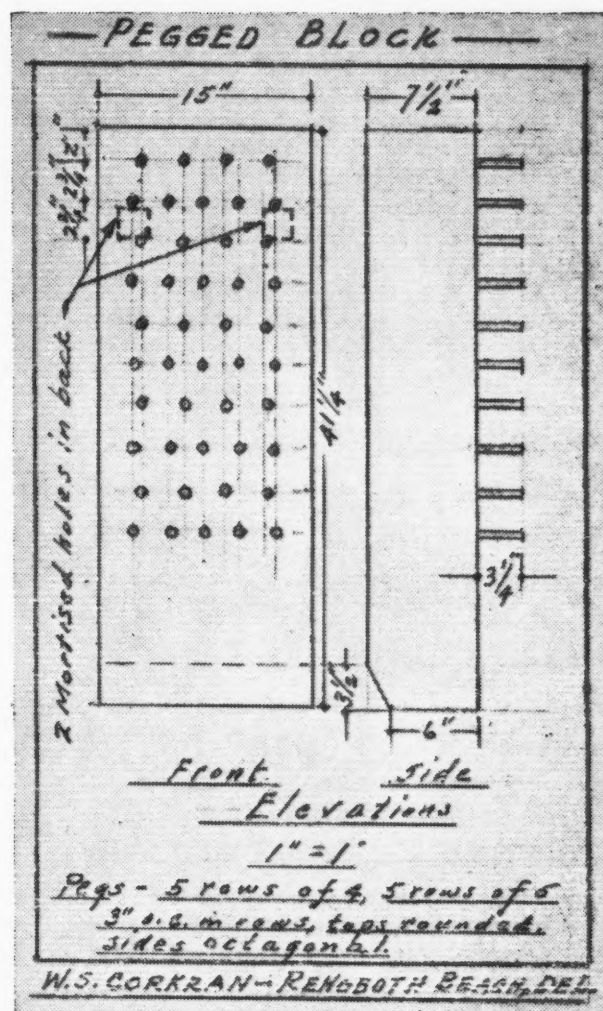


Just before the annual meeting we received a letter from W. S. Corkran of Rehoboth Beach, Delaware in regard to the pegged block shown in the cut and sketch.

He wrote: "It is evidently about two hundred years or more years old and was found on the ground acting as a support for the girder of an old house which was erected about one hundred and seventy-years ago near Concord, Sussex County, Delaware. None of the workmen or anyone in the community had ever seen anything like it, and the only industry that neighborhood ever had at about the time the house was built was said to have been a tannery. We were therefore trying to think of any possible way this piece could have been used in a tannery."

Curators at the Smithsonian Institution thought it might have been used as a warping board used for setting the warp for a loom. Members of EAIA who saw the sketch and photographs suggested it might have been used as a "shotline faking 'box'" but a retired Coast Guard Commander who examined it states that the pegs are not long enough and are not tapered. Also, the item is entirely too heavy to be moved around readily, and there is no provision for handles.

The pegs are octagonal in shape with rounded tops.



The Chronicle



issued occasionally for members of
**EARLY AMERICAN
INDUSTRIES ASS'N**

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men, and other workers.

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Cooperstown, New York

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Communications regarding the contents of THE CHRONICLE should be addressed to the Editor; regarding back numbers to Loring McMillen; suggestions for members to any of the Officers; all other matters to the President. Addresses as here given.

DUES

The annual dues are payable January 1st, and are as follows: Regular members, \$3.00; Supporting members, \$5.00; Sustaining members, \$10.00 and up. There is no distinction between classes, except the amount of dues, but THE CHRONICLE cannot be financed unless a considerable number of the members pay more than \$3.00. Each member is expected to voluntarily place himself in the class which represents the amount he is willing to contribute to the support of the Association for the current year. Life membership costs \$50.00. THE CHRONICLE is sent to all members without additional charge.

Editor's Comment:

For the benefit of new members and older ones who misplaced the previous questionnaire sent out in 1948, we are enclosing a new one with this issue. Those who have filled them out and returned them, may want to make additions or changes.

When compiled, mimeographed lists in suitable binders will be available to all members for \$1.00 each to cover the cost of preparation and mailing.

In this issue we are using an article written by Gillian W. B. Bailey, which gives the history of barrel-making from ancient times to the 19th century.

By interesting coincidence, at the time we received Mrs. Bailey's article, another on Cooperage arrived giving a first-hand recollection of barrel-making carried on in a country cooper's shop, which turned out rum barrels, buckets and other items from the early 1800's to about 1890.

This article, written by George L. Miner of Providence, Rhode Island will be published in the December CHRONICLE.

We know you have gained a great deal of knowledge from the article *The Sailmaker's Gear*, which we published in two installments. We are greatly indebted to Mr. M. V. Brewington, the author and Mr. Walter Muir Whitehill, editor of *The American Neptune*, where it was originally published. And the drawings by Catharine A. Perry did much to make it interesting.

In the Harrington Gun Shop at Old Sturbridge Village are two sailmaker's benches, and cases hold many examples of the sailmaker's tools shown in the June issue.

Resolution

Presented by Charles Rufus Harte, June 17, 1950

Mr. Rudolph P. Hommel, a charter member and a long time director of this Association died March 14, 1950 as the unhappy result of an automobile accident.

A most helpful supporter of the Association, his masterly "China at Work" has established him as an outstanding figure in the field of early industrial history. The result of eight years intensive personal investigation in that country, its great value was made possible only by reason of his sympathetic and diplomatic work amongst a people not inclined to be helpful to foreigners.

As a member of this Association he had endeared himself to all with whom he came in contact, especially to those members with whom he so efficiently and helpfully worked.

In his untimely death both this Association and his wide circle of friends outside it have suffered an irreparable loss.

In formal recognition and appreciation of his worth I move this slight tribute be spread upon our records, and that we instruct our secretary to send an attested copy to Mrs. Hommel and her daughter.

Early American Industries

Membership

Membership lists should be amended as follows:

(N) denotes new member
(D) denotes decease

CALIFORNIA

Los Angeles 7: Woodward, Mr. Arthur, Chief Curator of History, Los Angeles County Museum (1600) (N)

San Francisco: Wickland, Mr. G. W., Wells Fargo Bank and Union Trust Co., 14 Montgomery St. (1599) (N)

CONNECTICUT

Norwich: LaPierre, Mrs. Charlotte C., The Lamp Post, Salem Turnpike (1604) (N)

ILLINOIS

Chicago 14: Chicago Historical Society, North Avenue and Clark Street (1589) (N)

IOWA

Waterloo: The Henry W. Grout Historical Museum, 414 Commercial Building (1596) (N)

KANSAS

Wichita 4: Mueller, Col. Harrie S., 1505 Park Place (1610) (N)

MAINE

Farmington: Butler, Mrs. Benjamin, 93 Main Street (1594) (N)

MASSACHUSETTS

Boston 16: Harmon, Mr. Dudley, 1032 Statler Building (1587) (N)

East Haverhill: Whittemore, Mr. Edwin C., The 1670 Tavern, 22 Wharf Lane (1601) (N)

Holden: Reed, Mr. A. Bradford, 26 Maple Street (1590) (N)

Holyoke: Towne, Mr. R. P., National Blank Book Co. (1586) (N)

Lee: Myers, Mrs. Eloise L., Richmond Avenue (1605) (N)

Southbridge: Wells, Mrs. George B., Off Eastford Road (1598) (N)

Taunton: Mahoney, Mrs. Mary J., 36 Floral Street (1608) (N)

NEBRASKA

Lincoln 9: Nebraska State Historical Society, State Capitol (1585) (N)

NEW YORK

Amsterdam: Elwood, Mr. Walter, 41 Division Street (1606) (N)

Beacon: Slocum, Dr. C. J. (393) (D)

Brooklyn 13: Brooklyn Children's Museum, 185 Brooklyn Avenue (1595) (N)

Cooperstown: Parshall, Mrs. Carmelita, 108 Pioneer Street, (1593) (N)

Hempstead, Long Island: Learmonth, Mr. Henry, 215 Hilton Avenue (1591) (N)

Riverhead, Long Island: Suffolk County Historical Society, West Main Street (1607) (N)

OHIO

Chillicothe: Ross County Historical Society, West 5th Street (1609) (N)

Cincinnati: Historical and Philosophical Society of Ohio, University of Cincinnati Library Building (1597) (N)

Cincinnati: Rowe, Mr. John J., The Fifth Third Union Trust Co. (1588) (N)

RHODE ISLAND

Providence: Shippee, Mrs. Newell C., 417 Plainfield Street (1592) (N)

TEXAS

Dallas 1: Dallas Historical Society, Hall of State (1602) (N)

WEST VIRGINIA

Wheeling: Oglebay Institute (1603) (N)

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This is the last number of Volume III of THE CHRONICLE and work on the Index has started. It will be available for \$1.00 and will be mailed upon request.

The Chronicle

Communications

From Miss Helen G. Holley, Museum Historian
Old Sturbridge Village

"Do you have any material on stave cradles, and if not, can you direct us to a likely source? We have such a cradle, sometimes called a barrel cradle, I believe, but no information. Our cradle came from Connecticut and now we have a photograph of one in northern Vermont. We do not seem to be able to run down a thing about the origin of stave cradles.

"Any information you can give us will be greatly appreciated."

From Mary Earle Gould, Worcester, Mass.

"I have been asked to explain the process of photographing my collection. I use brown wrapping paper for the floor of the picture, using it over a piece of ply board placed on a card table. The background is a piece of celotex measuring five feet by four feet, which gives a contrast in color. When photographing anything white or light in color, I use a black, dark brown or dark blue color. For example, I lay an old brown portiere on my set-up, perfectly smooth, when taking dolls or band boxes.

"I use an old folding Kodak, as it has a perfect lens, with bulb attachment, and have a tripod with revolving socket. I close the shutter to the smallest opening and use a bulb rather than a time exposure, holding the shutter open for five to seven seconds according to the objects I am photographing.

"In arranging objects, I emphasize the points that are important and space them so there is no overlapping in a group.

"A portrait attachment gives the best detail at a distance of from four to five feet and I prefer one flood light in a holder in my hand, waving it back and forth to prevent dark shadows. Two stationary lights placed in back of the camera at either side also give good results, but take a longer exposure.

"An expert does my finishing and prints a larger size than the negative which is $2\frac{1}{2}$ by $4\frac{1}{4}$ inches. I find I get sharper detail with Ansco Plenachrome than with Kodak films."

From F. M. Scheibley, Swarthmore, Pa.

"I am wondering if you could give me some information about the early American bow-drill or tell me where I could get some information on it? I have recently acquired what seems to be a good example but am unable to find anybody with authentic knowledge."

From Holyoke Public Library, Holyoke, Mass.

"In your last issue of THE CHRONICLE you were pleased to place a request for back numbers for us. I now take pleasure in advising you that this advertisement has resulted in our procuring the two numbers we wished."

Old Museum Village of Smith's Clove

For half a century Roscoe W. Smith of Monroe, Orange County, New York has been gathering relics of the American way of life and on Saturday, July 15th he officially opened his Museum Village. Seventeen of a planned twenty-eight or thirty buildings are completed, arranged around a village green in a thirty-acre site on Route 17, a mile west of Monroe.

Smith's Clove—or Valley—was the name of the locality before Monroe was incorporated and it was originally named for Mr. Smith's ancestors, six generations removed, who were the first settlers before 1750.

Some of the buildings are log cabins, some are of field stone, others are clapboarded but all are filled with the old appliances of bygone days which were used by our ancestors in their daily life in the home, in the shop, or on the farm.

The group includes a weaving shop, a blacksmith shop, a candle shop (containing also a display of lamps of all kinds) a schoolhouse, a fire house, a country store, a barber shop, cider mill, shoemaker shop and up-and-down saw mill. One of the barns contains a display of treadmills powered by horses or dogs, and a large circular treadmill is in good working condition.

The Village will be of particular interest to members of EALA and it will be noted that Mr. Smith was elected to the board of directors at the Annual Meeting. Later THE CHRONICLE will use some pictures of the Village.

THE CHRONICLE

of Early American Industries

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